

**Antec**  
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## HCP-750 POWER SUPPLY

USER'S MANUAL

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## HIGH CURRENT PRO SERIES

### HCP-750 POWER SUPPLY

#### RAW POWER MEETS UNRIVALED PERFORMANCE

Antec's HCP-750 unifies raw power with advanced PSU engineering to meet the demands of high performing PCs. A full-featured, 80 PLUS® Gold-certified unit, the HCP-750 is capable of outputting 99 percent of its rated power on four +12V rails, ensuring CPU and graphics card compatibility. Exclusive to the High Current series, HCP-750 boasts High Current heavy-gauge 16 AWG wiring that boosts conductivity, increasing efficiency and improving power delivery. In addition, a double-layer PCB, onboard DC-to-DC converters and Active Power Factor Correction (PFC) provide substantial voltage stability.

#### STANDARDS AND FEATURES

The connectors and power specifications of the HCP-750 PSU are all compatible with ATX12V v2.3 and EPS12V v2.92 specifications. The HCP-750 features Universal Input, which automatically senses when you connect the power supply to any AC power source between 100 - 240V without setting a voltage switch. This power supply also features Active Power Factor Correction (PFC), which improves the power factor value of the power supply by altering the input current wave shape, helping to power transmission across the grid.

#### SYSTEM PROTECTION

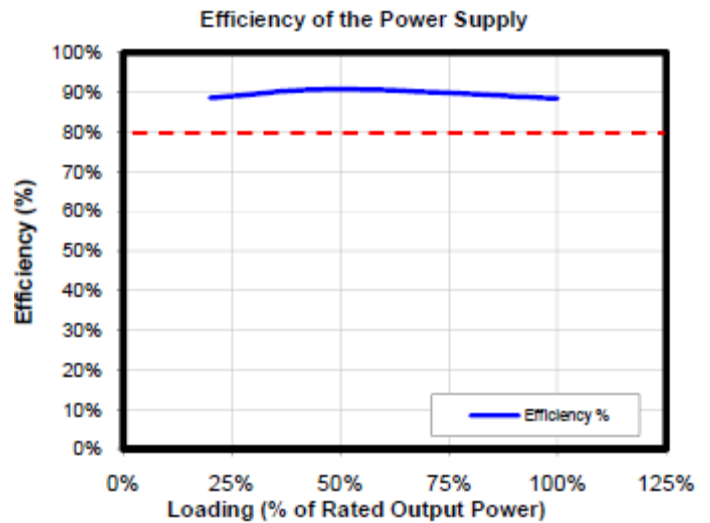
A variety of industrial-grade safety circuitry will help protect your computer: Over Current Protection (OCP), Over Voltage Protection (OVP), Short Circuit Protection (SCP), Over Power Protection (OPP) and Over Temperature Protection (OTP). Sometimes the PSU will "latch" into a protected state. You will need to power off the PSU and clear the fault before it will function again. There are no user-replaceable fuses in your HCP-750.

#### SPECIAL QUIET COMPUTING™ PULSE WIDTH MODULATION (PWM) FAN

A PWM fan can spin much more slowly and be quieter than a voltage-controlled fan. The PSU uses a PWM fan that can spin as slow as 260 RPM or as fast as 2600 RPM, depending on load and ambient temperature. The PSU will vary the fan speed depending on the load of your computer and should be nearly inaudible when your computer is idling. The location of the PSU fan also helps to reduce the sound emitted by your computer.

## 80 PLUS® CERTIFICATION

80 PLUS® certification is the most widely recognized independent standard in power supply efficiency. An 80 PLUS® certified power supply uses less energy and generates less heat to stay cooler, run quieter and last longer. The HCP-750 has been 80 PLUS® Gold certified to be at least 87% efficient at a wide range of operating loads; this will lower your operating costs and help protect the environment.



## NVIDIA™ SLI™-READY CERTIFIED

Antec's HCP-750 is NVIDIA™ SLI™-Ready and ATI CrossFireX™ certified for use with multiple high-end graphics cards for superior parallel graphics processing.

## POWER OUTPUT

The HCP-750 power supply distributes power on separate rails. To see the output capacity and regulation for each different voltage, see Table 1.

TABLE 1

Output Voltage	Load Max.	Regulation	Ripple & Noise
+3.3V	25A	±3%	< 50 mV
+5V	25A	±3%	< 50 mV
+12V <sub>1</sub>	40A	±3%	< 120 mV
+12V <sub>2</sub>	40A	±3%	< 120 mV
+12V <sub>3</sub>	40A	±3%	< 120 mV
+12V <sub>4</sub>	40A	±3%	< 120 mV
-12V	0.5A	±6%	< 120 mV
+5VSB	4A	±3%	< 50 mV

## INTELLIGENT HYBRID CABLE MANAGEMENT

The HCP-750 uses Intelligent Hybrid Cable Management. Cables that are important or mandatory are permanently connected to the PSU for the highest quality power delivery. There are modular jacks on the back of the PSU to add additional cables as needed. Using only the cables you need will reduce clutter and improve airflow inside your case. For the list of connected and optional cables, see Table 3.

## MODULAR CABLE JACKS

There are three 5-pin black jacks and five 10-pin red jacks on the back of your HCP-750 PSU. These jacks are for the optional cables that come with your power supply. A modular 10-pin connector system allows you plug 5-pin connectors into the 10-pin jacks if you run out of 5-pin jacks.








## +12 VOLT RAIL DISTRIBUTION

The HCP-750 uses four separate +12 volt power rails. Different connectors are hooked up to separate circuits to aid in the balanced distribution of power between devices in your computer. The +12V rails have been assigned to different connectors, as shown in Table 2, to prevent voltage sags in one device due to sudden demands for power by another device.

TABLE 2

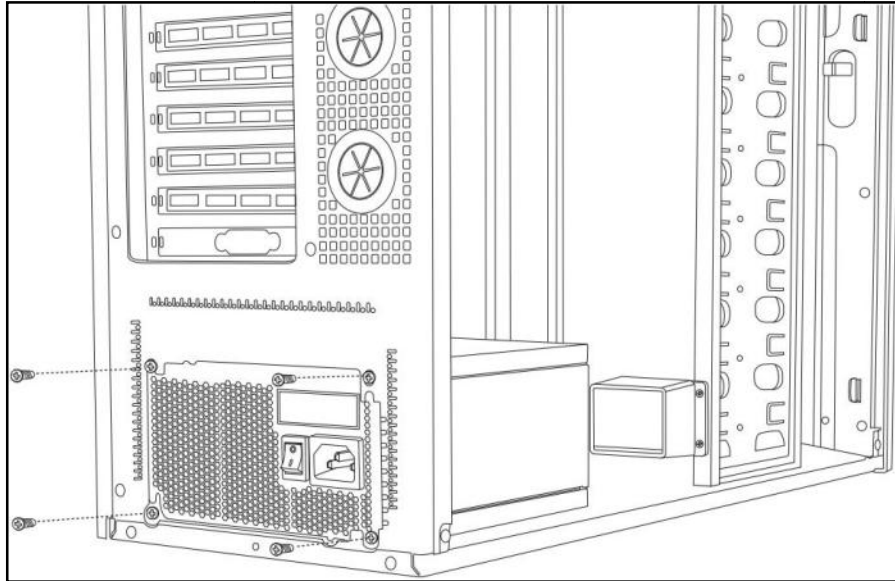
Direct Cabling	+12V Rail
24(20 + 4)-pin Motherboard	1
8(4 + 4)-pin ATX12V/EPS12V	2
8(6 + 2)-pin PCI-E	3

TABLE 3

Cable Quantity	Power Connectors	Part Name	Description
N/A		Power supply direct cabling	24(20 + 4)-pin main connector
			8(4 + 4)-pin ATX12V/EP12V
			2 × 8(6 + 2)-pin PCI-E
1	 x 1	EPS12V connector w/ cable	Includes one EPS12V CPU connector
1	 x 3	Molex connector w/cable	Includes three Molex connectors
1	 x 3  x 1	Molex connector + floppy connector	Includes three Molex connectors and one floppy connector
3	 x 3	Serial ATA connector w/cable	Includes three Serial ATA connectors
2	 x 2	PCI-Express connector w/cable	Includes two 8(6 + 2)-pin PCI-E connectors

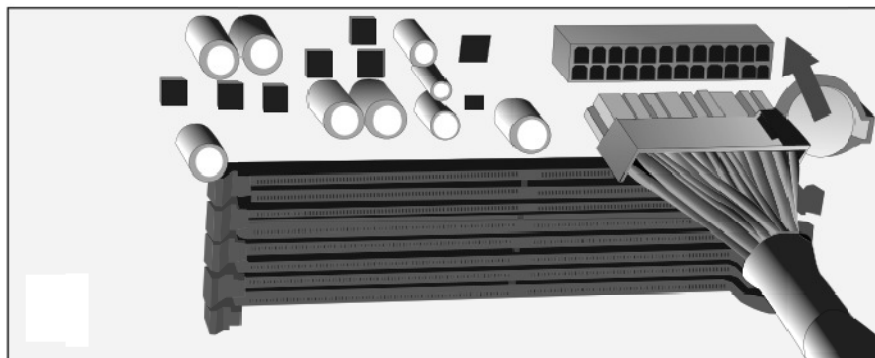
## INSTALLATION:

1. Install the HCP-750 PSU into either the top or bottom of your case with the four screws provided. Refer to your case manual if you are unsure where the power supply should be installed.



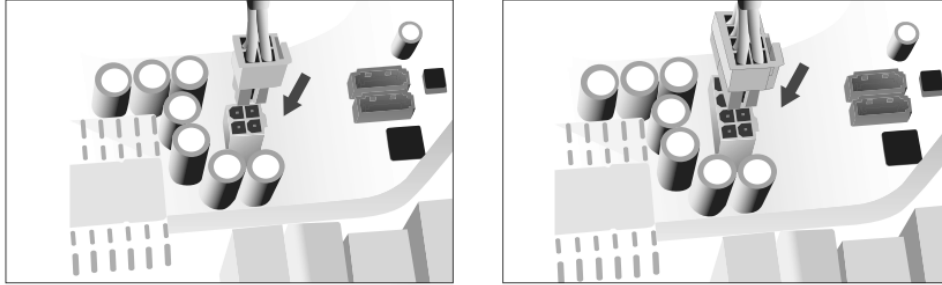
2. Install the HCP-750 PSU into your case with the four screws provided.
3. Connect the 24-pin main power connector to your motherboard. If your motherboard uses a 20-pin connector, detach the 4-pin attachment on the 24-pin connector.

**Note:** The detachable 4-pin section cannot be used in place of a 4-pin +12V connector.

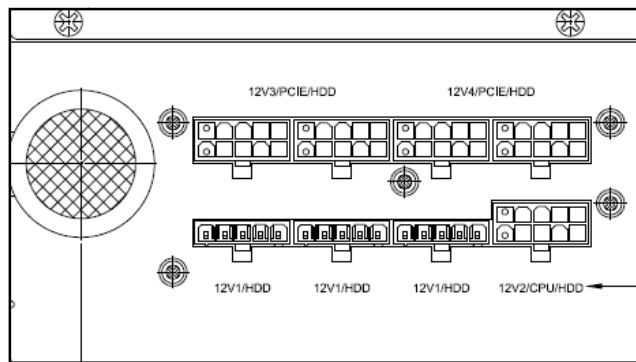


4. Connect the 8-pin or 4+4-pin connector for the CPU. If your motherboard has an 8-pin socket with a cover on some of the openings, we recommend that you remove the cover and use the 8-pin connector.

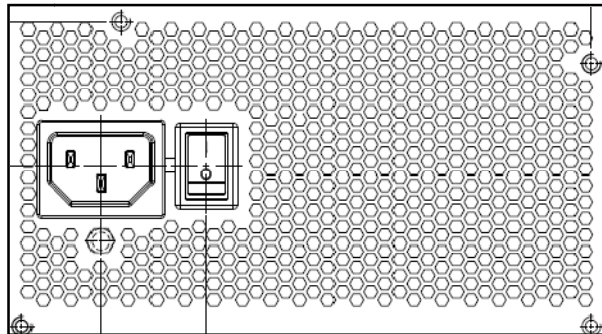
**Note:** Please also refer to your motherboard user's manual for any special instructions.



5. Connect extra cables from the cable pack to the sockets on the power supply only if needed. If you are going to plug the PCI-E cables into the PSU, they should go into the red sockets. If the red sockets are not being used for PCI-E, then they can be used for any other type of cable supplied in the pack that accompanies the PSU.



6. Connect the AC power cord to the power supply AC inlet. Be sure to use the heavy-duty cord supplied with your HCP-750.



7. PCI-E graphics cards use different amounts of power. For some, a single 6-pin connector is sufficient, making the hardwired connector the preferred choice. More powerful cards use multiple connectors, including the advanced 8-pin PCI-E connector. The 8-pin PCI-E connector on the HCP-750 can be used as either a 6- or 8-pin connector.

8. Hard drives, optical drives (CD/DVD/BluRay™) and other accessories will use either the older 4-pin Molex connector or the newer 15-pin SATA connector. 4-pin Molex connectors have two black, one yellow and one red wire. The SATA connector has an additional orange power wire.
9. When you have all the connections secured, turn the switch on the PSU to the “|” position.



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